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ABSTRACT

Phonics is the application of the science of speech sounds to reading and spelling, and it is concerned with the sounds of the spoken language (phonemes) and their graphic forms (graphemes). In the English language there is not a 1-to-1 grapheme-phoneme relationship; 43 basic speech sounds are recorded by using 26 letters. Other irregularities result from the fact that there are approximately 250 ways of indicating (spelling) the 43 phonemes. Also, there are articulation and functional differences between vowels and consonants which further complicate the language. Descriptions and illustrations of the 43 phonemes are provided, and examples of words and sentences rewritten phonetically are included. (WB)

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PHONICS

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(Presented at the Reading Workshop, Adams State College, August, 1965)

In the speech department of the University one may take a course in American Phonetics. This course, a very interesting one, deals with the scientific study of speech sounds and how the sounds are produced or articulated. One learns the International Phonetic Alphabet (IPA) which is a means by which the speech sounds may be symbolized. Speech sounds are classified as to how they are articulated, and sectional and geographic variations are analyzed.

When the science of speech sounds is applied to reading and spelling we have phonics. In phonics one is concerned with the sounds of the spoken language (phonemes) and their graphic forms (graphemes), or, said more simply, with speech sounds and the letter or letters of the alphabet that signify these sounds. Once the reader learns to associate sounds and symbols, he is then able to use this understanding as an aid in turning an unknown word, or a word not recognized immediately as a sight word, into its spoken counterpart. Assuming that the spoken form is in his meaning vocabulary we may then say that he has perceived the word. This is phonics.

The English language has many interesting characteristics. One that we are concerned with in our study of phonics is that it is possible to record the sounds of our spoken language through the use of an alphabet. Regardless of what we say or the number of words we use, the speech sounds that are involved in these words may be recorded through the

twenty-six letters of our alphabet. This is in sharp contrast to the Chinese language, for example, where a stylized picture must be drawn to indicate each idea. Here there must be as many pictures (ideographs) as there are ideas, a fact which makes the Chinese language very difficult to learn to write. In English twenty-six letters do the job.

But once we begin to use our alphabet to transcribe the sounds of our spoken language there arise several confusing situations. The first is that there are more phonemes in our language than there are letters of the alphabet. Though linguists do not agree completely on the number of phonemes comprising the English language, we shall refer throughout this discussion to <u>forty-three</u> (in due course of time we shall study each one). In other words, the forty-three basic speech sounds must somehow be recorded with twenty-six letters. Obviously some of the letters have to double in brass. Take one example. The letter a signifies the sound that one hears in plate, fat, father, and care--four different sounds recorded with the same letter. This is one of the things that makes the reading of English difficult, for the question confronting one who is learning to read is, "Which sound shall I use when I see the symbol a in an unfamiliar word?" If our language had as many sounds as symbols or as many symbols as sounds so that there would be a point-to-point relationship between them, the pronunciation of unfamiliar English words would be relatively simple, for one would always know, given a particular letter, what sound to associate with it in a word. This kind of relationship is the case in some languages, Italian, for example, where there are twenty-seven phonemes and twenty-seven graphemes, or in Russian, where there are thirty-six symbols.

designating thirty-four phonemes. These languages, we say, are phonetically regular, or nearly so, while the English language is phonetically irregular or inconsistent.

Then there is another characteristic of our phonetic system that makes for difficulties in both spelling and reading. That is, a given phoneme may be indicated with a number of different spellings. In fact, there are about 250 ways of indicating the forty-three phonemes. Take, for example, the sound of a that you hear in the word plate. We call this the "long" sound of a. But notice the various ways that this same sound is indicated in these words--steak, gauge, veil, obey, bay, straight, and freight. Here again the novice reader may legitimately ask the question, "How am I to know that eigh and au have the same sound, and that they indicate what one hears in the word plate?" And as for spelling, you can see the problem when one says, "I know that the word I want to spell has in it a long a sound, but should I indicate it with ea, au, or ay?" And so it goes. It is no wonder that some children have trouble with reading, to say nothing about spelling.

Vowels and consonants--their differences.

The twenty-six letters of our alphabet may be divided into two groups--vowels and consonants. The vowel letters are a,e,i,o, and u (sometimes w and y also serve as vowels). The remaining twenty-one letters are consonants. Vowel sounds are differentiated from consonants sounds, first, in the way they are articulated. Vowel sounds are made with an unobstructed column of air passing over the vocal cords. For example, the difference between the sound of a in the word fate and the

sound of e in the word met is an articulation difference that has its origin in the throat.

Consonant sounds, on the other hand, are made by modifying the air column by the lips, teeth, tongue, palate, or cheeks. For example, in articulating the sound of p as in the word pin, the lips are closed and the air column is momentarily closed off. In articulating the sound of f as in fun, a fine column of air is passed between the teeth and the lower lip, while with g as in gun, the soft palate aids in forming the sound.

Then too, vowel sounds are differentiated from consonant sounds by virtue of the fact that the consonants are relatively stable or consistent. The letter l, for example, indicates the sound that one hears in the word like, little, or flake. Whether the letter appears in the initial, final, or medial position in a word, or regardless of the vowel following it, the sound is essentially the same. This is not the case for all consonants, as we shall see later, but it is for most of them. The same vowel letter, on the other hand, may designate several different sounds. The vowel letter u may indicate one sound in the word union, and still others in us, pull, and rule.

Furthermore, consonants may be differentiated from vowels because of the function that each serves. Consonants provide the identifying framework for a printed word, while vowels serve as bridges between the consonants or consonant groups. One would have little difficulty in identifying a word from which vowels were omitted, but it would be very difficult to tell what the word is if the consonants were missing. Ch_ldr_n could easily be identified as children, but who could guess the

word __ i __ e_?

The forty-three phonemes--consonants.

We are now ready to consider the basic building blocks of our spoken language and the symbols used to indicate or designate them. Let us begin with the consonants. Keep in mind, now, that we shall be referring to both letters and sounds. The two are not synonymous. (The alphabetical letter l, for example, would be pronounced "el", but it would stand for the sound one hears at the beginning of the word like.)

First, we shall consider a group of single consonant letters. In each case we shall indicate a word in which the sound is heard.

Consonant letter	Words in which sound appears	Other sounds indicated by this letter.
b	big, fib	
d	do, sad	(t) stopped
f	file, off	(v) of
g	go, dig	(j) gym
h	have	
j	jug	
k	king, like	
l	long, doll	
m	man, sham	
n	no, man	
p	pin, slip	
r	row, far	
s	sift, bus	(z) is (sh) sugar
t	top, bat	

v	vest, revive
w	water
y	yes
z	zest, buzz

So far we have accounted for eighteen phonemes. But before going on to another group, notice that some consonant letters are missing from the above list; namely, c, q, and x. The reason that these three letters are not included is that they do not designate a sound that is different from those that we have already accounted for above. C may indicate either the s phoneme (city or cent) or the k phoneme (cat, cut), and both of those phonemes (s and k) are already accounted for above. Q stands for the consonant combination kw as in quick, and x stands for the ks or gz as in fox or exact. So for all practical purposes c, q, and x, might be dropped from the alphabet, since we have other letters to indicate these sounds.

Now to continue with another group of phonemes. It so happens that our language requires another group of modified sounds of consonants for which we have no single letter. So we put two consonants together to indicate six sounds. These groups of two-letter combinations we call speech consonants or consonant digraphs. There are:

ch	chop, beach
sh	show, cash
ƒh (voiced)	ƒhis, baƒhe
th (unvoiced)	thin, both
ng	ring
zh	measure, garage

Notice that these two letters indicate one speech sound or phoneme. These letter groups occuring in words must always be thought of as indicating one sound, not two.

Before going to vowels, observe how some of the consonant letters may be combined in our language. As was indicated above, a single consonant letter or a digraph may designate a single speech sound as in pat, win, or church (remember ch stands for only one sound). However, in some words two speech sounds are very closely blended as in the words flat, place, or snap. One actually hears two sounds, but they are very closely associated. These are called consonant blends. We have a number of these two-letter combinations--cl (climate), gl (glass), br (breeze), fr (fry), sk (skim), sw (swim), and nd (sand). There are also a few three-letter blends--thr (three), spr (spring), spl (splash), scr (scrap), and shr (shrill). These are only examples. There are still others.

Continuing with the phonemes--vowels.

Vowels need not be much more confusing than the consonants. However, we are going to find several speech sounds indicated by the same letter.

Vowel letter	Sounds indicated	Example
a	ā (long)	āte
	ă (short)	ăt
	ä (dieresis)	fäther, fär
	â or â (circumflex or tilde)	câre or c̃are
e	ē	ēat
	ĕ	ĕnd
i	ī	īce
	ĭ	ĭt

o	ō	gō
	o͝	sp o͝t
	ô	ô off, ô ften
u	ū	ūse
	u͝	u͝p
	u̇	r u̇le, boot (b u̇t)
	u̇	p u̇t, foot (f u̇t)
	û	b û rn, her (h û r), fir, (fur)

Sometimes w and y indicate vowel sounds, but when they do they borrow sounds that we have already accounted for above. For example, in the words happy and sky, y indicates, in the first case, the i͝ (some say e), and in the second, ī. W designates a vowel sound in cow (we'll have more to say about the ow combination in the following paragraph.) So y and w wear two hats, just to add to the confusion.

We also would add to our phoneme list two additional sounds requiring vowels to indicate them. The first is oi--oy combination as found in the words oil and boy, and the second is the ou--ow combination as found in out and owl. These are called diphthongs, or some might say, vowel blends. Notice that oi and oy designate the same sound, and that ou and ow stand for the same sound.

In the same way that we have consonant digraphs (one sound), we also have vowel digraphs. Examples would be ea (each), ai (aim), oa (boat), ee (beet), ie (tie), ay (day), ei (receive). You will note that in these combinations the second element in each group is silent, and the first has the long vowel sound (ē⁄ch, ā⁄m, bō⁄t, etc.) Since these long sounds

have already appeared in our vowel group above, we need not add any new phonemes to our list of building blocks.

So far we have accounted for forty-two basic elements. Now for the forty-third--the schwa sound. By definition this is the "indeterminate sound of the vowel in an unstressed position." For instance, in the word, a bove', the a, occurring in the unaccented position, does not have a clearly defined sound. It is more of a "tapped u" or a very short u. Moreover, in the words ta 'ken, pen 'cil, le'mon, and cir'cus (note that e, i, o, and u are in unaccented syllables) the sound is the same regardless of the vowel used to indicate it. And in each case it is this very short u. This sound is called the schwa sound and is indicated by the "upside down e" or ə.

Let's see now how our phonemes add to make forty-three.

18	indicated by single consonant letters
6	indicated by consonant digraphs
16	indicated by single vowel letters
2	indicated by diphthongs
1	indicated by the schwa symbol
43	

At this point let's get some practice in taking a group of words and recording their phonemes with the correct symbols. First, we shall have to be able to hear the sounds in a word regardless of the spelling used. In the word bad, for example, we hear three sounds (say it slowly) b-ă-d; in meat we hear three, m-ē-t; in bought, three, b-ô-t; in fleece we hear four, f-l-ē-s (the fl is blended, but still identified as separate sounds) and in preened, five, p-r-ē-n-d (again, the pr and the

nd are blends.) Remember, listen for the basic elements, then using your keys, decide which symbol signifies that sound. You can use only those symbols that occur in your list of forty-three. This is called phonetic respelling. Try these:

	Did you get?
tub	tŭb
stacks	stăks
sticks	stĭks
soak	sōk
sock	sŏk
edge	ĕdj

Let's try some more. Don't look at the answer sheet until you have finished.

1. lake
2. Luke
3. luck
4. lick
5. fox
6. purr
7. pure
8. poor
9. tube
10. boot

11. limb
12. moss
13. bough
14. wind (strong breeze)
15. fare
16. soil
17. scream
18. leaves
19. foot
20. view

21. with
22. shank
23. shirk
24. farm
25. ball
26. lives (verb)
27. lives (noun)
28. thing
29. soot
30. news

31. sale
32. soul
33. serve
34. spy
35. salt
36. thistle
37. proud
38. phone
39. plow
40. few

We should be ready now to do some two-syllable words. Watch out for the schwa sound of the vowel in the unstressed position.

41. children
42. cartoon
43. barter
44. pepper
45. bundle
46. reason
47. chipmunk
48. admire
49. wrinkle
50. lazy
51. ashame
52. certain
53. sprinkle
54. stomach
55. machine
56. secure
57. selfish
58. persuade
59. soapsuds
60. salute

Rewrite the following sentences phonetically.

61. It is best to prepare for a time of need.
62. It is not only fine feathers that make fine birds.
63. When you can make better butter, put some in the batter.

Answer sheet for page 10 of Phonics

1. lāk
2. luk
3. lu͝k
4. li͝k
5. fo͝ks
6. pu̇r
7. pūr
8. pu̇r
9. tūb or tu̇b
10. bu̇t
11. li͝m
12. mos
13. bou
14. wi͝nd
15. fȧr
16. soil
17. skrēm
18. lēvz
19. fu̇t
20. vū
21. wi͝ƒh
22. shu̇ngk
23. shu̇rk
24. fȧrm
25. bȯl
26. li͝vz
27. līvz
28. thi͝ng
29. su̇t or sūt
30. nūz or nu̇z
31. sāl

32. sōl
33. sûrv
34. spī
35. sôlt
36. this'əl
37. proud
38. fōn
39. plou
40. fū
41. chĭl' drə n
42. kär tŭn'
43. bär' tər
44. pĕp' ər
45. bŭn' dəl
46. re' zən
47. chĭp' mŭnk
48. ăd mīr'
49. rĭng' kəl
50. lā' zĭ
51. ə shām'
52. sûr' tən
53. sprĭng' kəl
54. stŭm' ŭk
55. m ə shēn'
56. sĭ kyůr'
57. sĕl' fĭsh
58. pər swād'
59. sōp' sŭdz
60. s ə lůt'
61. ŭ it ĭ iz bĕst tů pri-pâr' fôr ə tīm ŭv nēd.
62. ŭ it ĭ iz nŏt ōnlĭ fīn fĕ/hərz ŧ/hăt māk fīn bûrdz.
63. hwĕn ū kăn māk bĕtər bŭtər půt sŭm ĭn /hə bătər.